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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/434,404	11/05/1999	ATSUSHI MATSUMOTO	862.3194	3919

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EXAMINER

POKRZYWA, JOSEPH R

ART UNIT	PAPER NUMBER
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2622

DATE MAILED: 10/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/434,404

Applicant(s)

MATSUMOTO ET AL.

Examiner

Joseph R. Pokrzywa

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's amendment was received on 7/15/03, and has been entered and made of record. Currently, **claims 1-17** are pending. Further, applicant's supplemental amendment received on 7/24/03 has also been entered and made of record.

Response to Arguments

2. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1-9, 11, 12, and 14-17** are rejected under 35 U.S.C. 102(b) as being anticipated by LeClair *et al.* (U.S. Patent Number 5,822,510).

Regarding **claim 1**, LeClair discloses an image processing apparatus (see Figs. 3 and 4, column 4, lines 11 through 67), comprising means for generating a bitmap image on the basis of inputted object data (column 5, lines 34 through 44), means for holding attribute information representing plural types of attributes of the inputted object data in correspondence with each

pixel of a bitmap image generated by the generation means (column 5, lines 4 through 11, and column 5, lines 45 through 67), means for converting the bitmap image generated by the generation means into data capable of being processed by an image output unit (column 5, lines 4 through 33, and column 6, line 66 through column 7, line 60), and means for switching the contents of processing in the conversion means on the basis of a combination of the plural types of attributes represented by the attribute information held by the hold means (column 5, lines 12 through 20, and column 6, line 47 through column 7, line 42).

Regarding *claim 2*, LeClair discloses the apparatus discussed above in claim 1, and further teaches that the holding means holds an attribute map in which the attribute information is arranged for each pixel corresponding to a two-dimensional coordinate position of the bitmap image (column 6, lines 20 through 46, and column 11, lines 5 through 50).

Regarding *claim 3*, LeClair discloses the apparatus discussed above in claim 1, and further teaches that the holding means embeds the attribute information into bits of a part of each pixel data of the bitmap image (column 6, lines 1 through 46, and column 8, lines 7 through 41).

Regarding *claim 4*, LeClair discloses the apparatus discussed above in claim 1, and further teaches that the attribute information includes information representing whether object data corresponding thereto has the form of bitmap data (column 6, lines 20 through 46, and column 8, lines 7 through 41) or the form of vector data.

Regarding *claim 5*, LeClair discloses the apparatus discussed above in claim 1, and further teaches that the conversion means includes processing for converting a bitmap image generated by the generation means into binary data using a dither matrix (column 9, line 62 through column 10, line 19), and the switching means changes the dither matrix used in the

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conversion means on the basis of the attribute information (column 9, line 62 through column 11, line 26).

Regarding **claim 6**, LeClair discloses the apparatus discussed above in claim 1, and further teaches that the generation means generates a bitmap image based on RGB color space (column 7, lines 43 through 60), the conversion means includes color conversion processing for converting each pixel data of the bitmap image into pixel data represented by YMCK color space (column 7, lines 43 through 60), and the switch means changes an algorithm of the color conversion processing on the basis of the attribute information held by the holding means (column 6, line 66 through column 7, line 60).

Regarding **claim 7**, LeClair discloses the apparatus discussed above in claim 1, and further teaches that the attribute information is configured by a plurality of bits (column 6, lines 32 through 39, and column 7, lines 43 through 53), and the switch means switches the contents of processing of the conversion means in accordance with a combination of ON/OFF states of each bit (column 7, lines 43 through 53, and column 9, line 62 through column 10, line 19).

Regarding **claim 8**, LeClair discloses the apparatus discussed above in claim 7, and further teaches that each bit of the attribute information represents an independent attribute (column 7, lines 32 through 42, and column 11, line 27 through column 12, line 19).

Regarding **claim 9**, LeClair discloses the apparatus discussed above in claim 7, and further teaches that the attribute information contains a bit group representing a specific attribute using a plurality of bits (column 7, lines 32 through 60, and column 11, line 27 through column 12, line 19).

Regarding *claim 11*, LeClair discloses a storage medium for storing a control program for image processing (see Figs. 3 and 4, column 4, lines 11 through 67), the control program comprising program codes for generation process for generating a bitmap image on the basis of object data inputted (column 5, lines 34 through 44), codes of a holding process for holding attribute information representing plural types of attributes of the object data with bringing it into correspondence with each pixel of a bitmap image generated in the generation process for holding in a memory (column 5, lines 4 through 11, and column 5, lines 45 through 67), codes of a conversion process for converting the bitmap image generated in the generation process into data capable of being processed by an image output unit (column 5, lines 4 through 33, and column 6, line 66 through column 7, line 60), and codes of a switching process for switching the contents of processing in the conversion process on the basis of a combination of the plural types of attributes represented by the attribute information held by the hold process (column 5, lines 12 through 20, and column 6, line 47 through column 7, line 42).

Regarding *claim 12*, LeClair discloses an image processing system having a host device and an image output unit (see Figs. 3 and 4, column 4, lines 11 through 67), comprising means for generating a bitmap image on the basis of object inputted data (column 5, lines 34 through 44), means for holding attribute information representing plural types of attributes of the inputted object data in correspondence with each pixel of the bitmap image generated by the generation means (column 5, lines 4 through 11, and column 5, lines 45 through 67), means for converting the bitmap image generated by the generation means into data capable of being processed by the image output unit (column 5, lines 4 through 33, and column 6, line 66 through column 7, line 60), and means for switching the contents of processing in the conversion means on the basis of a

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combination of the plural types of attributes represented by the attribute information held by the hold means (column 5, lines 12 through 20, and column 6, line 47 through column 7, line 42).

Regarding **claim 14**, LeClair discloses the system discussed above in claim 12, and further teaches that the attribute information contains information representing whether object data corresponding thereto represents a monochrome or a color object (column 6, lines 35 through 39, and column 7, lines 11 through 60).

Regarding **claim 15**, LeClair discloses the system discussed above in claim 12, and further teaches that the attribute information contains information representing whether object data corresponding thereto represents a character or any kind of object other than characters (column 6, lines 35 through 39, and column 7, lines 11 through 60).

Regarding **claim 16**, LeClair discloses the system discussed above in claim 12, and further teaches that the attribute information contains information representing whether it has a single bit or a plurality of bit strings (column 6, lines 35 through 39, and column 7, lines 11 through 60) and whether or not it is a ground, and wherein the conversion means omits processing for a pixel which is a ground (column 9, line 62 through column 11, line 4).

Regarding **claim 17**, LeClair discloses an image processing method (see Figs. 3, 4, and 10-16, column 4, lines 11 through 67, and column 7, line 61 through column 9, line 47), comprising the steps of generating a bitmap image on the basis of object data inputted (column 5, lines 34 through 44), holding in a memory attribute information representing plural types of attributes of the inputted object data in correspondence with each pixel of a bitmap image generated in the generating step (column 5, lines 4 through 11, and column 5, lines 45 through 67), converting the bitmap image generated in the generating step into data capable of being

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processed by an image output unit (column 5, lines 4 through 33, and column 6, line 66 through column 7, line 60), and switching the contents of processing in the conversion process on the basis of a combination of the plural types of attributes represented by the attribute information held in the holding step (column 5, lines 12 through 20, and column 6, line 47 through column 7, line 42).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 10 and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over LeClair *et al.* (U.S. patent Number 5,822,510) in view of Nicholson *et al.* (U.S. Patent Number 5,729,637).

Regarding **claim 10**, LeClair discloses the apparatus discussed above in claim 1, but fails to specifically teach if the object data is represented by page description language. Nicholson discloses an image processing apparatus (see Fig. 1), comprising means for generating a bitmap image on the basis of inputted object data (column 5, lines 41 through column 6, line 9), means for holding attribute information representing plural types of attributes of the inputted object data in correspondence with each pixel of a bitmap image generated by the generation means (column 6, lines 10 through 51, and column 7, lines 26 through 65), means for converting the bitmap image generated by the generation means into data capable of being processed by an image

output unit (column 11, lines 46 through 65), and means for processing the conversion means on the basis of a combination of the plural types of attributes represented by the attribute information held by the hold means (column 11, line 46 through column 12, line 35). Further, Nicholson teaches that the object data is represented by page description language (column 6, lines 25 through 46, and column 7, lines 27 through 50). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include Nicholson's teachings in the system of LeClair. LeClair's system would easily be modified to include Nicholson's teachings, as the systems share cumulative features, being additive in nature.

Regarding *claim 13*, LeClair discloses the system discussed above in claim 12, but fails to specifically teach that the attribute information includes information organized hierarchically, and wherein there are one or more units of attribute information of low order concept which is subordinate to that of high order concept. Nicholson discloses an image processing system having a host device and an image output unit (see Fig. 1), comprising means for generating a bitmap image on the basis of inputted object data (column 5, lines 41 through column 6, line 9), means for holding attribute information representing plural types of attributes of the inputted object data in correspondence with each pixel of a bitmap image generated by the generation means (column 6, lines 10 through 51, and column 7, lines 26 through 65), means for converting the bitmap image generated by the generation means into data capable of being processed by an image output unit (column 11, lines 46 through 65), and means for processing the conversion means on the basis of a combination of the plural types of attributes represented by the attribute information held by the hold means (column 11, line 46 through column 12, line 35). Further, Nicholson teaches that the attribute information includes information organized hierarchically

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(column 10, line 38 through 67), and wherein there are one or more units of attribute information of low order concept which is subordinate to that of high order concept (column 10, line 51 through column 11, line 25). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include Nicholson's teachings in the system of LeClair. LeClair's system would easily be modified to include Nicholson's teachings, as the systems share cumulative features, being additive in nature.

Citation of Pertinent Prior Art

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Miller *et al.* (U.S. Patent Number 6,257,693) discloses a system that utilizes attributes to optimize printing.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joe Pokrzywa whose telephone number is (703) 305-0146. The examiner can normally be reached on Monday-Friday, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on (703) 305-4712. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

J.R.P.

Joseph R. Pokrzywa
Examiner
Art Unit 2622

jrp



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